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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/718,755	11/22/2000	Mark H. Englert	USG 3325	3446

7590

11/26/2001

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EXAMINER

RAJGURU, UMAKANT K

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 11/26/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-10 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-10 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 2
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

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1. Claims 1-10 are under examination.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adamowicz et al (U.S.P. 4549931) in view of Fischer (structure of ..... Azetidinium functionality), Baig (U.S.P. 5911818) and Symons (U.S.P. 5395571)

(Fischer and Baig are of record on PTO-1449, paper

no. 2)

Adamowicz discloses inorganic binders for articles formed from fibers, one such article is an acoustic ceiling tile (col. 1, lines 12-13). Inorganic and organic fibers form one ingredient of the composition that is used to prepare such a <sup>tile</sup> ~~tile~~ (col. 10, lines 61-65) together with second ingredient which is a binder. Binder is used at 5%. Also used is mineral wool (col. 11, lines 16-18).

Adamowicz does not disclose Azetidinium groups of the binder, starch and retention aid (of instant claims 3, 7, 8, and 10).

*maintained  
May 13, 2002*

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According to Fischer, the wet tensile strength of polyaminoamide epichlorohydrin depends upon azetidinium which is the most reactive crosslinking group of that resin (page 1, abstract).

Baig discloses an acoustic tile composition in which starch is used as a preferred binder. It is used in combination with latex and cellulose fiber (col. 6, lines 13-20).

Symons discloses a building board or an acoustic tile made out of a composition comprising sodium carboxymethyl cellulose which is well-known as a thickening agent and *NR* therefore can be used also as <sup>a</sup>~~an~~ retention aid.

Therefore it would have been obvious to use ~~the~~ binder of Adamowicz as one having *NR* positively charged <sup>a</sup>~~A~~zetidinium groups for enhancing the reaction of that binder and the cellulosic materials. It would have also been obvious to use starch as a binder because starch is *NR* found to be a preferred binder (to go with a latex) in an acoustic <sup>tile</sup>~~tile~~ and also to use sodium carboxyl methyl cellulose because it can eliminate or at least minimize loss of binder (during water felting process) due to its ability of thickening.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to U.K. Rajguru whose telephone number is (703) -308-3224. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck, can be reached on (703) -308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) -872-9310 or 872-9311.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) -308-0661.

Rajguru/dh 

November 20, 2001



James J. Seidbeck  
Supervisory Patent Examiner  
Telephone Number 1700